



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,100	01/28/2004	William C. Albertson	GP-302869	2181

7590 10/06/2005

CHRISTOPHER DEVRIES
General Motors Corporation
Legal Staff, Mail Code 482-C23-B21
P.O. Box 300
Detroit, MI 48265-3000

EXAMINER

LEWIS, TISHA D

ART UNIT PAPER NUMBER

3681

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/766,100	Applicant(s) ALBERTSON, WILLIAM C.	
	Examiner TISHA D. LEWIS	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-6, 9, 12-14, 17-21 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 7, 8, 10, 11, 15, 16, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

42

DETAILED ACTION

The following is a response to the amendment received on July 29, 2005 which has been entered.

Response to Amendment

Claims 1-26 are pending in the application.

-The objection to claims 9-13 has been withdrawn due to applicant correcting the numbering of these claims.

Response to Arguments

Applicant's arguments filed July 29, 2005 have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the DOD engine continuing to run while in the deactivated mode) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As to the phrase "DOD", just adding this to the limitations does not provide enough support to suggest that the engine can run with fewer cylinders firing, the prior art references do disclose a "DOD" function for the engines by activating and deactivating cylinders automatically, and the Kataoka et al ('632) reference discloses (Figures 7-10) that even after the #1 and #3 cylinders are deactivated/activated, the engine doesn't actually stop rotating until after the fuel is cut (column 18, lines 25-39), therefore; this engine does displace cylinders on demand when needed for fuel consumption.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-6, claim after claim 8, 9, 12, 13, 17-21 and 24-26 are rejected under 35 U.S.C. 102(e) as being unpatentable by Kataoka et al ('632). As to claims 1, 5, claim after claim 8, 12, 17, 18, and 20, Kataoka et al discloses a control for an engine of a hybrid vehicle with a DOD engine (2), an electric machine (3) and a battery (5) wherein the engine operates in an activated mode (normal running), transitions from an activated mode to a deactivated mode (stop control), transitions from an deactivated mode to an activated mode (start control) and smoothes disturbances (controls engine vibration) in engine torque during both transitions using the machine (rotating machine opposite rotation of engine).

As to claims 4, 6, 9, 13 and 26, Kataoka et al discloses the machine supplying opposite torque to the engine when the engine torque is idle (idle stop, start).

As to claims 19 and 21, Kataoka et al discloses a control (4) commanding the machine (3) to generate opposite torque to the engine when the transitions first occur (ignite or cut fuel to first cylinder, etc. cylinder #1).

As to claims 24 and 25, Kataoka et al discloses an inverter (column 8, lines 30-32) connected to the machine and battery (5) wherein the battery can be of an lead acid.

Claims 1, 4-6, claim after claim 8, 9, 13, 14, 17, 18-21 and 26 are rejected under 35 U.S.C. 102(e) as being unpatentable by Tatara et al ('877). As to claims 1, 5, claim after claim 8, 12, 17, 18, and 20, Tatara et al discloses a hybrid vehicle having a DOD engine (2), an electric machine (3), a battery (paragraph 0046), operating the engine in an activated mode (engine cruise mode), transition engine from activated to deactivated mode (motor cruise mode), transition engine from deactivated to activated mode (engine cruise mode) and smoothes disturbances (control variation in drive power from engine, jolt) during both transitions using the machine to output driving power matching the power of the engine cylinders.

As to claims 4, 6, 9, 13 and 26, Tatara et al discloses the machine supplying torque when the engine torque is reduced (deactivation to motor cruise mode).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tatara et al in view of Kataoka et al. Tatara et al discloses that a battery is used with the machine, but does not disclose if an inverter is used.

Kataoka et al discloses an inverter (column 8, lines 30-32) connected to the machine and battery (5) wherein the battery can be of an lead acid.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Tatara et al with an inverter in view of Kataoka et al provide direct, alternating current between the machine and battery.

Allowable Subject Matter

Claims 2, 3, 7, 8, 10, 11, 15, 16, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to
the Patent and Trademark Office (Fax No. (703) 000-0000) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-Thur 6 AM TO 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tdl
October 3, 2005


TISHA LEWIS
PRIMARY EXAMINER
Au 3681 10/3/05